CLAIMS

What is claimed is:

1. An apparatus, comprising:

a semiconductor die having a through via formed therein;

a first interconnect formed on a frontside of the die and a second interconnect formed on a backside of the die coupled with the through via; and

a first package substrate electrically coupled with the first interconnect and a second package substrate electrically coupled with the second interconnect.

2. The apparatus of claim 1, further comprising a first underfill layer between the front side of the die and the first substrate and a second underfill layer between the backside of the die and the second substrate.

3. The apparatus of claim 1, further comprising a substrate ball electrically coupled between the first and second substrates.

4. The apparatus of claim 1, wherein the first and second interconnects comprise solder balls.

5. The apparatus of claim 1, wherein the semiconductor die is thinned using one selected from the group consisting of a backgrinding process, a chemical mechanical polishing (CMP) process, and a spin etching process.

6. The apparatus of claim 2, wherein the underfill layers comprise a no-flow underfill material.

7. The apparatus of claim 1, wherein the front side of the die comprises an active side of the die.

8. The apparatus of claim 1, wherein the substrates are package substrates to distribute signals to and from the semiconductor die.

9. The apparatus of claim 8, wherein signals comprise an input/output (IO) signal and a power signal.

10. A method, comprising:

forming a through via in a back side of a semiconductor die and attaching a first interconnect to the through via;

attaching a second interconnect to a device side of the die;

electrically coupling the first interconnect to a first substrate; and

electrically coupling the second interconnect to a second substrate.

11. The method of claim 10, wherein the through via connects with the device side.

12. The method of claim 10, further comprising:

dispensing a first underfill layer on the first package substrate; and

dispensing a second underfill layer on the backside of the semiconductor die.

13. The method of claim 12, further comprising:

attaching a substrate ball between the first and second package substrates.

14. The method of claim 10, wherein the first and second interconnects comprise solder balls.

15. The method of claim 10, further comprising thinning the semiconductor die.

16. The method of claim 10, wherein the first and second underfill layers comprise a no-flow underfill.

17. The method of claim 10, wherein the first and second substrates comprise a first and second package substrate to distribute signals to the semiconductor die.

18. An apparatus, comprising:

a semiconductor die having a through via formed in a backside of the die, the through via to provide a path to a device side of the die;

a first solder ball coupled with the through via, and a second solder ball coupled with the device side;

a first package substrate electrically coupled with the first solder ball to distribute signals to the through via and the back side of the die;

a second package substrate electrically coupled with the second solder ball to distribute signals to the device side of the die.

19. The apparatus of claim 18, wherein the semiconductor die is thinned to form the through via.

20. The apparatus of claim 18, wherein the first and second solder ball are controlled collapse chip connection (C4) attachments.

21. The apparatus of claim 18, further comprising a substrate ball to electrically couple the first and second package substrates.